

**REMARKS/ARGUMENTS**

Reconsideration of this application is requested. Claims 25, 26 and 28-40 are in the case.

**I. THE FORMAL REJECTION**

Claims 25, 26 and 28-40 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly indefinite for the reasons detailed in the paragraph bridging pages 2 and 3 of the Action. In particular, claim 25 stands rejected on the ground that the limitation "mixing a solution of an alkali salt of either a C<sub>6</sub>-C<sub>30</sub> fatty acid or a C<sub>6</sub>-C<sub>30</sub> alkyl sulfonic acid...wherein the anode composition is a mixture of zinc hydroxide and an insoluble salt of a C<sub>6</sub>-C<sub>30</sub> fatty acid..." is indefinite on the ground that it is allegedly unclear how the final mixture can include a salt of a C<sub>6</sub>-C<sub>30</sub> fatty acid if in the first part a C<sub>6</sub>-C<sub>30</sub> alkyl sulfonic acid is chosen. The rejection is respectfully traversed.

In response, and without conceding to the rejection, the alternative of mixing a solution of an alkali salt of a C<sub>6</sub>-C<sub>30</sub> alkyl sulfonic acid with the suspension of a first precipitate has been cancelled without prejudice from the method as defined in claim 25. Moreover, the phrase "zinc anode" or the term "zinc" has been inserted in claim 25 to emphasize that the method is directed to the preparation of a zinc anode composition.

Based on the above amendments, it is believed that the outstanding rejection has been obviated. The Examiner is thanked for noting inconsistencies in the wording of the claims. Withdrawal of the rejection is now respectfully requested.

## II. THE OBVIOUSNESS REJECTIONS

Claims 25, 26 and 28-30 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over U.S. Patent 5,824,434 to Kawakami in view of U.S. Patent 4,297,249 to Przybyla. The rejection is respectfully traversed.

Claim 25 claims a method of preparing a zinc anode composition by (i) preparing a suspension of a first precipitate of zinc hydroxide; (ii) mixing a solution of an alkali salt of a C<sub>6</sub>-C<sub>30</sub> fatty acid with the suspension of a first precipitate of zinc hydroxide to provide a mix; and then (iii) adding a solution of a salt of an acid to the mix to provide the zinc anode composition as a second precipitate. The zinc anode composition is a mixture of zinc hydroxide and an insoluble salt of a C<sub>6</sub>-C<sub>30</sub> fatty acid that has an electrochemically active form of zinc.

The Action states on page 3 that:

“Kawakami teaches the process of making an anode electrode by adding a precipitated zinc hydroxide with a salt of an acid such as sodium phosphate...”.

From this statement, it appears that the assumption is made that all forms of zinc hydroxide used in the preparation of zinc electrodes and zinc electrode compositions (by inference) are precipitated. As noted in the reply to Office Action mailed 20 December 2007, Kawakami does **not** disclose or suggest the claim element of the zinc hydroxide being **precipitated**. The Action only acknowledges that Kawakami is silent in respect of using a fatty acid in making a zinc electrode. The Action then combines Kawakami with Przybyla to support the obviousness rejection. However, it is believed that this combination would not have been contemplated by one of ordinary skill and,

even if the combination had been attempted (it is believed that would not have occurred), the presently claimed invention would not have resulted or have been rendered obvious thereby.

Referring to Przybyla, the Action states:

"The metal salt of the fatty acid promotes a reduction of oxygen evolution and also acts as a lubricant by lowering the internal friction of the powder."

The basis for this statement is unclear, as no reference to passages in Przybyla is provided. If it is the position of the Office that the reduction of oxygen evolution would provide sufficient motivation for one of ordinary skill to combine Kawakami and Przybyla, this is not correct. As stated in the reply to the Office Action transmitted by facsimile on 11 February 2009:

"Przybyla is directed to the preparation of silver oxide powder for use in the cathode of an alkaline silver oxide galvanic cell."

The evolution of oxygen at the cathode of an alkaline silver oxide galvanic cell is attributable to the oxidising conditions that exist in the vicinity of this electrode. In a power releasing device such as the cell of a battery, the anode is negatively charged. When zinc is the electrochemically active metal of the anode, reducing conditions exist in the vicinity of the electrode. Motivation to combine Kawakami and Przybyla on the basis of decreasing oxygen evolution does not therefore exist in the context of preparing a zinc anode composition.

The invention sought to be patented in the present case is a method of preparing a zinc anode composition. It will be noted that the forming of a zinc anode and the preparation of a zinc anode composition are two distinct manufacturing processes, and

a teaching in the context of the former is not therefore necessarily applicable to a teaching in the context of the latter.

The Action does not appear to consider the context in which the prior art has been provided. Lubrication is a consideration in the context of manufacturing (i.e. assembling) an electrode. The method defined in claim 25 is used in the context of preparing an electrode composition. The function of the fatty acid in these two contexts is not the same. The function of the fatty acid in manufacturing an electrode is one of mechanical lubrication. The function of the fatty acid as a lubricant is not relevant to addressing the problem of dendrite growth.

If it is the position of the Office that lubrication provides sufficient motivation to combine Kawakami and Przybyla, it is maintained that this combination fails to suggest the subject matter as now claimed. The Action further states:

“At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add alkali metal salt [ ..of a fatty acid..] to the first precipitate of zinc hydroxide before adding a solution of a metal salt of an acid, since it has been held that the selection of reversing the steps of a prior art process is prima facie obvious; the selection of any order of performing process steps is prima facie obvious in the absence of new or unexpected results, and any order in mixing ingredients is prima facie obvious. [emphasis added]”

First, the Action has not identified a prior art process for preparing an electrode composition. It is therefore unclear what steps are being reversed. The Action merely asserts that the zinc anode composition as prepared by the method defined in claim 25 could be obtained by combining Kawakami and Przybyla, which is not correct.

Secondly, contrary to the assumption implicit in the rejection, the method of preparing a zinc anode composition as defined in claim 25 does provide new and

unexpected results. These new and unexpected results are discussed in paragraph [0062] of the specification as published (publ. no. US 2005/002603 8).

Thirdly, a zinc anode composition where the zinc hydroxide and insoluble salt of the C<sub>6</sub>-C<sub>30</sub> fatty acid are present as an intimate mixture in a co-precipitate is not prepared by the mixing of ingredients in any order. The method defined in claim 25 is directed to the mixing of ingredients in a specific order to obtain a zinc anode composition that provides the new and unexpected results. This is not suggested by the applied art.

Absent any motivation to arrive at the present invention based on the cited art, it is clear that a *prima facie* case of obviousness has not been generated in this case. Withdrawal of the obviousness rejection is accordingly respectfully requested.

Claim 31 stands rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kawakami in view of Przybyla and further in view of U.S. Patent 4,086,392 to Mao. Claims 32-35 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kawakami in view of Przybyla and further in view of U.S. Patent 4,146,685 to Tucholski. Claims 36-40 stand rejected under 35 U.S.C. §103(a) as allegedly unpatentable over Kawakami in view of Przybyla and Tucholski and further in view of U.S. Patent 5,688,616 to Yamawaki and U.S. Patent 4,086,392 to Mao. In response, claims 31, 32-35 and 36-40 are all dependent, either directly or indirectly, on claim 25, and thereby incorporates the subject matter of that claim which is patentable over Kawakami and Przybyla for the reasons discussed above. The cited secondary art does not cure the deficiencies of Kawakami and Przybyla. Withdrawal of all the obviousness rejections is respectfully requested.

**II. INFORMATION DISCLOSURE STATEMENT**

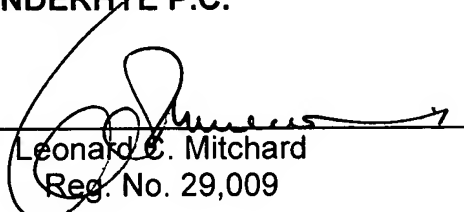
A Supplementary Search Report has issued in respect of the counterpart European Patent Application No. 02717236.0. In light of this, an updated citation listing including the citations of the report is attached hereto, together with the requisite IDS fee. Copies of English language abstracts of the citations are also attached to the present response.

Favorable action is awaited.

Respectfully submitted,

**NIXON & VANDERHYE P.C.**

By: \_\_\_\_\_

  
Leonard E. Mitchard  
Reg. No. 29,009

LCM:iff  
901 North Glebe Road, 11th Floor  
Arlington, VA 22203-1808  
Telephone: (703) 816-4000  
Facsimile: (703) 816-4100